LPDES REPORTING REQUIREMENTS HANDBOOK



March 16, 2001

Environmental Protection Agency Region 6 (6EN-WC) 1445 Ross Avenue Dallas, TX 75202

This booklet is designed to assist the permittee in complying with the reporting requirements in the NPDES permit. We will take you step-by-step in filling out the Discharge Monitoring Report (DMR) and submitting non compliance and other reports. We have listed the most commonly asked questions with the answers. You will also find helpful information in the form of commonly used math formulas and acceptable abbreviations for filling out the DMR.

PROGRAM AUTHORITY

Facilities that discharge wastewater to receiving waters of the United States must apply for a National Pollutant Discharge Elimination System (NPDES) permit for that discharge. Program Authority is in accordance with Sections 301, 302, 308, 402 and 503 of the Federal Water Pollution Control Act of 1972, as amended by the Clean Water Act of 1977. The Permittee is responsible for understanding and meeting all permit requirements and submitting complete, accurate and legible self-monitoring data.

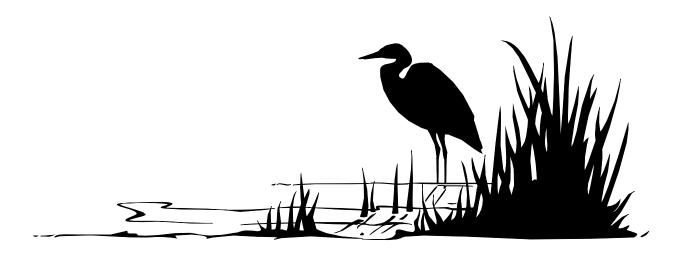


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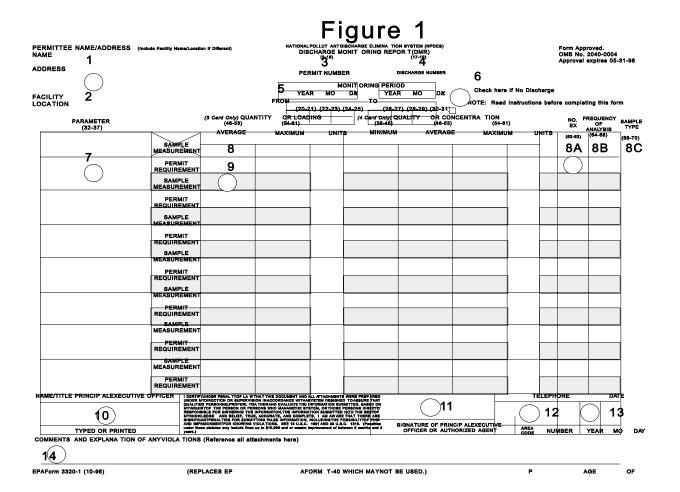
DISCHARGE MONITORING REPORTS (DMRS)

The required sample collection and analytical results must be reported to the EPA/NPDES State Agency through the submission of DMRs (EPA Form 3320-1). These DMRs are to be submitted on the date specified in the permit. It is extremely important that the data reported on the DMR be accurate and timely. The reported data will be compared with the current limits contained in the permit or any enforcement order to determine facility compliance.

SEE PAGES 4-6 FOR

FIGURE 1 INSTRUCTIONS FOR

COMPLETION



DMR Instructions

PAPER WORK REDUCTION ACT NOTICE

Public reporting burden for this collection of information is estimated to vary from a range of 10 hours as an average per response for some minor facilities, to 110 hours as an average per response for some major facilities, with a weighted average for major and minor facilities of 18 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

(from back of DMR) GENERAL INSTRUCTIONS

- 1. If form has been partially completed by preprinting, disregard instructions directed at entry of that information already pre-printed.
- 2. Enter "Permittee Name/Mailing Address (and facility name/ location, if different)," "Permit Number," and "Discharge" where indicated. (A separate form is required for each discharge.)
- 3. Enter dates beginning and ending "Monitoring Period" covered form where indicated.
- 4. Enter each "Parameter" as specified in monitoring requirements of permit.
- 5. Enter "Sample Measurement" data for each parameter under "Quantity" and "Quality" in units specified in permit. "Average" is normally arithmetic average (geometric average for bacterial parameters) of all sample measurements for each parameter obtained during "Monitoring Period"; "Maximum" and "Minimum" are normally extreme high and low measurements obtained during "Monitoring Period". (Note to municipals and secondary treatment requirement: Enter 30-day average of sample measurements under "Average", and enter maximum 7-day average of sample measurements obtained during monitoring period under "Maximum.")
- 6. Enter "Permit Requirement" for each parameter under "Quantity" and "Quality" as specified in permit.
- 7. Under "No Ex" enter number of sample measurements during monitoring period that exceeded maximum (and/or minimum or 7-day average as appropriate) permit requirement for each parameter. If none, enter "0".
- 8. Enter "Frequency of Analysis" both as "Sample Measurement" (actual frequency of sampling and analysis used during monitoring period) and as "Permit Requirement" specified in permit. (e.g. Enter "Cont," for continuous monitoring, "1/7" for one day per week, "1/30" for one day per month, "1/90" for one day per quarter, etc.)
- 9. Enter "Sample Type" both as "Sample Measurement" (actual sample type used during monitoring period) and as "Permit Requirement", (e.g. Enter "Grab" for individual sample, "24HC" for 24-hour composite, "CONT" for continuous monitoring, etc.)
- 10. Where violations of permit requirements are reported, attach a brief explanation to describe cause and corrective actions taken, and reference each violation by date.

- 11. If "No Discharge" occurs during monitoring period, check the box for "No Discharge".
- 12. Enter "Name/Title of Principal Executive Officer" with "Signature of Principal Executive Officer or Authorized Agent", "Telephone Number", and "Date" at bottom of form.
- 13. Mail signed Report to Office(s) by date(s) specified in permit. Retain copy for your records.
- 14. More detailed instructions for use of this Discharge Monitoring Report (DMR) form may be obtained from Office(s) specified in permit.
 - 15. Facilities using the digital form of the DMR must first obtain approval from the NPDES authority in their state. The parameters and data on the form must be mono-spaced (e.g. Courier) and have a size of 10 pitch (12 points). Approval for EPA Region 6 can be obtained by contacting Cathy Bius at (214)665-6456. Permitees holding a storm water general permit in New Mexico, Texas, or Oklahoma do not need approval if they use the correct type as specified above. THE FORM MAY NOT BE ALTERED IN ANY MANNER.

LEGAL NOTICE

This report is required by law (33 U.S.C. 1318; 40 C.F.R. 125.27). Failure to report or failure to report truthfully can result in civil penalties not to exceed \$10,000 per day of violation; or in criminal penalties not to exceed \$25,000 per day of violation, or by imprisonment for not more than one year, or by both.

DISCHARGE MONITORING REPORTS (DMRS)

<u>Instructions for Completion</u>

See Figure 1 DISCHARGE MONITORING REPORT

- 1. <u>Permittee Name/Address</u> Name and mailing address of permittee.
- 2. <u>Facility/Location</u> Enter if different from mailing address.
- 3. <u>Permit Number</u> State abbreviation and permit number as it appears on the NPDES permit, which consists of two alpha and seven numeric characters. In the case of General Permits, the first three characters will be alpha with the last six numeric.
- 4. <u>Discharge Number</u> (Outfall Number) Consists of a combination of four alpha and numeric characters. (EX: 001A, 002Q, 003S, 004Y).

Some exceptions include, but are not limited to, biomonitoring/toxicity. The first two characters are TX, indicating toxicity testing. The last two characters are usually an assigned code used for Agency tracking purposes (EX: TX1A, TX1S, TX1Y, etc.).

5. <u>Monitoring Period</u> - From first day of monitoring period through last day of monitoring period. The dates should be displayed as YR MO DAY. Applicable monitoring periods will be specified in each permit. Some examples include but are not limited to:

Monthly	_	96	01	01	to	96	01	31
Quarterly	_	96	01	01	to	96	03	31
Semi-annual	_	96	01	01	to	96	06	30
Annual	_	96	01	01	to	96	12	31

- 6. <u>No Discharge</u> If facility has no flow/no discharge for a specific outfall and/or monitoring period, "NO DISCHARGE" must be indicated for that outfall and monitoring period.
- 7. <u>Parameters</u> Specified in the permit as effluent characterists for each discharge number (outfall), one parameter per box. Each box must display the parameter name and corresponding storet code number. (EX: BOD (00310), pH (00400), TSS (00530), flow (50050)). The parameters should display on the DMR form in numeric order by storet code number.
- 8. <u>Sample Measurement</u> Sample measurement data for each parameter under "Quantity or Loading" or "Quality or Concentration" in accordance with permit limitations. Indicate units (lbs/day, mg/l, su, etc) as specified in the permit. It may be necessary to do calculations to convert data to the units required in the permit. "Average" is normally arithmetic average (geometric average for bacterial parameters) of all sample measurements for each parameter obtained during the monitoring period. "Maximum" and "Minimum" are normally the highest and lowest measurements obtained during the monitoring period. (See Table 1 MATH FORMULAS.)
- A. No. EX (Number of Exceedances) Total of sample measurements that exceed the daily maximum, daily minimum, 7-day (weekly) average permit limit. DO NOT include monthly average or daily average violations in this field. If none, enter "0". Permittees with continuous pH, or temperature monitoring requirements should consult the permit for what constitutes an exceedance and report accordingly.

- B. <u>Frequency of Analysis</u> **Actual** frequency of analysis used during the monitoring period; the minimum requirement is as specified in the permit. Enter "CONT" for continuous monitoring, "01/07" for one day per week, "01/30" for one day per month, "01/90" for one day per quarter, etc. Some examples are included in **Table 2**.
- C. <u>Sample Type</u> **Actual** sample type used during monitoring period. Enter "GRAB" for individual sample, "24HC" for 24-hour composite, "CONT" for continuous monitoring. Some examples are included in **Table 3**.
- 9. <u>Permit Requirement</u> Effluent limitations for each parameter as specified in the permit are displayed on the DMR under "Quantity or Loading" and/or "Quality or Concentration". Monitoring requirements for frequency of analysis and sample type as specified in the permit are also displayed. The DMR must reflect the most current monitoring and reporting requirements.
- 10. <u>Name/Title Principal Executive Officer or Authorized Agent</u> See the permit for qualifications of Principal Executive Officer and signature authorization.
- 11. <u>Signature</u> Original legible signature of authorized Principal Executive Officer or Authorized Agent. Every page of the DMR must have an original signature.

In the event a revised or corrected DMR is necessary, an original authorized signature and date of signature is required on each page. The word **REVISED** should be clearly visible on each page of the form.

- 12. <u>Telephone</u> Telephone number of Principal Executive Officer.
- 13. $\underline{\text{Date}}$ **Actual date** of signature certifying authenticating data submitted on DMR.
- 14. <u>Comments</u> May contain any clarifying information by either Agency or Permittee.

NOTE: The results of any additional monitoring of parameters at the location(s) designated in the permit, using approved analytical methods, must be included on the DMR (see Part III.D.5 of permit).

MOST RECENT VERSION OF DISCHARGE MONITORING REPORTS CAN BE FOUND AT:

http://www.deq.state.la.us/enforcement/index.htm or http://www.epa.gov/earthlr6/6en/w/forms.htm



REVISED/CORRECTED DMRS

Sometimes it will be necessary for the facility to submit a revised or corrected DMR either because the Agency has requested it or the facility has discovered an error. Some reasons for submitting a revision/correction are:

- 1. Missing original or unauthorized signature
- 2. Missing NPDES Permit Number, Discharge Number (Outfall Number) and/or Monitoring Period
- 3. Missing sample measurements
- 4. Parameters not reported
- 5. Loading measurements not correctly calculated
- 6. Missing Frequency of Analysis, Sample Type and/or Number of Excursions

When a revised/corrected DMR is submitted, it must:

- 1. Have an original authorized signature
- 2. Date of new signature
- 3. Be clearly marked as a revised or corrected DMR

SELF-GENERATED DMR FORMS

In order to receive approval for use of a facility-generated (self-generated) DMR form, a facility must submit an approval request with sample DMRs reflecting permit requirements for each monitoring period and discharge number. The forms submitted for approval must be an exact replica of the DMRs provided by the Agency. The font size for the Permit Number, Discharge Number, Parameters and Sample Measurements should be 10 point, 12 characters per inch. These facility-generated forms must not be used until Agency approval has been obtained. If there is a change in monitoring or reporting requirements (EX: reissued permit), it will be necessary for the facility to revise their forms to reflect the changes and resubmit for approval.

NON-COMPLIANCE REPORTS

The Permittee shall report any instances of non-compliance with their permit. See your permit for specific requirements for reporting anticipated non-compliance, 24-hour reporting of conditions which may endanger health and the environment (via phone or fax) and other non-compliances which must be reported. The 24-hour Hot Line phone number is (214) 665-6595.

This report must include the following information as indicated on Figure 2, SAMPLE NON-COMPLIANCE REPORT:

- 1. Type of violation
- 2. Date of violation
- 3. Duration of violation
- 4. Cause of violation
- 5. Corrective action taken

Non-compliance Reports can also be submitted using the following Internet address: http://www.epa.gov/earthlr6/6en/w/cwareprt.htm

SAMPLE NON-COMPLIANCE REPORT

Permit Number:	Facility Name:
Month/Year:	Authorized Signature/Date:

Type of Violation (Avg/Max,,Bypass	Permit	Date of	Duration of		
Overflow, Etc.)	Limit	Violation	Viol.	Cause of Violation	Corrective Action or Other Narrative
EXAMPLE:					
TSS, daily max 67 mg/l	45 mg/l	3/16/95	1 day	Failure of sludge pump	Repaired pump, wasted sludge
Bypass, 100 gals at		3/23/95	2 hrs	Line blockage	Line cleared and cleaned
138 Pike St.					

Figure 2

SCHEDULES/REPORTS REQUIRED BY PERMITS

In addition to DMRs and non-compliance reports (NCRs), the permit may contain additional reporting provisions, with their own reporting requirements. These provisions could include compliance schedules with progress reports, pretreatment requirements, toxicity, sludge, stormwater, etc. The actual completion date of any scheduled activity must be included in the submitted report. See the permit for specific reporting dates and requirements.

MOST COMMONLY ASKED QUESTIONS

1. How do I report "too numerous to count" coliform samples?

Report **TNTC** on the DMR form. A TNTC reported on the DMR exceeds the permit limit and is considered a permit violation. Actual numbers are required by the permit and should be reported when possible.

2. How do I count number of exceedances?

If daily maximum/daily minimum, count each sample that is below and/or above the minimum/maximum limit.

If a 7-day average or weekly limit, every 7-day average which exceeds the limit in the permit shall be counted as one exceedance.

DO NOT INCLUDE 30-DAY AVERAGES OR DAILY AVERAGES AS EXCEEDANCES ON DMR. This exceedance is already included in the above calculations.

3. How do I calculate and report 7-day averages?

We recognize that calendar weeks and calendar months rarely coincide. Therefore, for the purpose of calculating and reporting 7-day averages, you should follow the process below:

- a. Define your week (SUN-SAT, MON-SUN, etc.).
- b. Calculate the averages of all sample data obtained for each week.
- c. The highest calculated weekly average will be reported on the DMR for the month in which (1) the week ends or (2) the week begins, or (3) the month which contains the greatest number of days. It is the choice of the facility. However, the choice should be consistent month to month, year to year. SET A RULE AND STICK WITH IT.
- 4. Who can sign a DMR?

See permit for authorized signatory official. An authorization for anyone other than the person designated in the permit must be on file with the Regulatory Agency and signed by the permit signatory authority.

5. Do I have to sign each page of my DMR?

Yes. Each page must be signed. If any revisions are submitted, that revised page must also have an original signature and new signature date.

6. Do I send copies of State DMRs to EPA (Texas only)?

No, and you do not need to send copies of EPA DMRs to TNRCC.

- 7. Do I have to send a copy of a non-compliance report for my state permit to EPA?
 - No. Copies of state required reports are not required to be submitted to EPA.
- 8. I received a letter from EPA telling me that the State has NPDES authority. Do I have to send any more reports to EPA?

Once you have received a letter from EPA transferring <u>enforcement</u> authority for your facility to an approved NPDES state, you no longer need to send DMRs, non-compliance reports, etc., to EPA, unless you receive a specific request or action from EPA.

TABLE 1

MATH FORMULAS

CONVERSION FACTORS:

1 gallon = 8.34 lbs. 1 cu. ft. = 7.48 gallons 1 acre = 43,560 sq. ft. 1 ft. head = .43 PSI π = 3.14

FORMULAS:

1. Area of a Rectangle (square units)

Length X Width = Area

2. Area of a circle (square units)

 π X radius² = Area or .785 X Diameter² = Area

3. Volume of rectangular or circular container (clarifier, pond, pipe, etc.)

Surface Area X Depth = Volume (cu. units)

4. Volume in Gallons

Volume in cu. ft. X 7.48 = gallons

5, Detention Time

Volume (gals.)

Flow (gpm) = Detention Time (in minutes)

NOTE: If flow is in gpd, detention time is in days.)

6. Circumference of a Circle

 π X Diameter = Circumference

7. BOD (mg/l)

(Initial D.O. - Final D.O.) X 100 % Dilution = BOD (mg/l)

OR

(Initial D.O. - Final D.O.) X Dilution Facor = BOD

Dilution Factor = TOTAL VOLUME
SAMPLE VOLUME

8. Suspended Solids (mg/l)

Weight₂ (mg) - Weight₁ (mg) X 1000 ml of Sample Filtered

9. Pounds of BOD, Solids, Chemicals

Concentration (mg/l) X Quantity (million gals.) X 8.34 = lbs.

NOTE: Quantity, Volume or Flow must be in million gals.

10. Weir Overflow Rate

<u>GPD</u> Length of Weir = gal./ft./day

11. Surface Loading Rate

GPD Surface Area = gal./sq.ft./day

METRIC SYSTEM

<u>Prefix</u>		<u>Value</u>	Ex	ample	
Kilo	-	1000	1 Kilogram	=	1000 Grams
Hecto	-	100	1 Hectogram	=	100 Grams
Deka	-	10	1 Deckagram	=	10 Grams
(Unit)	-	1	1 Gram	=	1 Gram
Deci	-	0.1 (1/10)	1 Decigram	=	0.1 Gram
Centi	-	0.01 (1/100)	1 Centigram	=	0.01 Gram
Mili	-	0.001 (1/1000)	1 Miligram	=	0.001 Gram
Micro	-	0.000001 (1/1,000,000)	1 Microgram	= (0.000001 Gram

METRIC SYSTEM CONVERSION FACTORS

1 pound 454 grams 1 ounce 28 grams 3.785 litres 1 gallon = 1 quart 0.946 litre 1 inch 25.4 milimeter 1 foot 0.305 meters = 1 mile 1.609 kilometers =

POPULATION EQUIVALENT

Population Average BOD (mg/l) X Average Flow (MGD) X 8.34
Equivalent = .17 lbs/person/day

Average BOD will consist of a minimum of four (6 hour composite) samples taken at least 5 days apart.

Average flow will be the average of at least 20 days within a 30-day period.

Example: If your average BOD is 200 mg/l and your average flow is 1.0 MGD

Pop. Eq. =
$$\frac{200 \text{ X}}{1.0 \text{ X}} \frac{1.0 \text{ X}}{8.34} = 9,812 \text{ people}$$

.17

TABLE 2

FREQUENCY OF ANALYSIS

FREQUENCY	DESCRIPTION	FREQUENCY	DESCRIPTION
N/A	NOT APPLIC	01/5Y	ONCE/5 YEARS
N/R	NOT REPORTD	01/60	ONCE/2 MONTHS
N/V	NOT VALID	01/7M	ONCE/7 MONTHS
CL/OC	CHLRNTN/OCCURS	01/90	QUARTERLY
DL/DS	DLY WHNDISCHRG	01/99	INSTNT
REPRT	REPORT	02/BA	TWICE/BATCH
WH/DS	WHEN DISCHRG	02/DS	TWICE/DISCH
WH/MN	MEASRD WHN MON	02/DW	TWICE/DSCHWK
01/BA	ONCE/BATCH	02/SH	TWICE/SHIFT
01/DD	ONCE/DSCHDY	02/YR	SEMI-ANNUAL
01/DM	ONCE/DSCHMN	02/01	TWICE/DAY
01/DQ	ONCE/DSCHQTR	02/07	TWICE/WEEK
01/DS	ONCE/DISCHG	02/12	TWICE/12 DAYS
01/DW	ONCE/DSCHWK	02/30	TWICE/MONTH
01/RN	ONCE/RN EVNT	02/90	TWICE/QTRLY
01/SH	ONCE/SHIFT	02/99	SEE PERMIT
01/SN	ONCE/SEASON	03/BA	THREE/BATCH
01/YR	ANNUAL	03/DS	THREE/DISCHG
01/01	DAILY	03/DW	3 DAYS/WEEK
01/02	ONCE/2 DAYS	03/YR	THREE/YEAR
01/03	ONCE/3 DAYS	03/01	THREE/DAY
01/04	ONCE/4 DAYS	03/05	THREE/5 DAYS
01/05	ONCE/5 DAYS	03/07	THREE/WEEK
01/06	ONCE/6 DAYS	03/08	THREE/8 DAYS
01/07	WEEKLY	03/30	THREE/MONTH
01/08	ONCE/8 DAYS	03/5Y	THREE/5 YEARS
01/09	ONCE/9 DAYS	03/99	SEE PERMIT
01/10	ONCE/10 DAYS	04/BA	FOUR/BATCH
01/11	ONCE/11 DAYS	04/01	FOUR/DAY
01/12	ONCE/12 DAYS	04/07	FOUR/WEEK
01/13	ONCE/13 DAYS	04/30	FOUR/MONTH
01/14	ONCE/2 WEEKS	04/99	SEE PERMIT
01/21	ONCE/3 WEEKS	05/BA	FIVE/BATCH
01/28	ONCE/4 WEEKS	05/DW	5 DAYS/WEEK
01/30	ONCE/MONTH	05/WK	5 TIMES/WEEK
01/4M	ONCE/4 MONTHS	05/01	5 TIMES/DAY
01/5M	ONCE/5 MONTHS	05/07	WEEK-DAYS

FREQUENCY	DESCRIPTION	FREQUENCY	DESCRIPTION
05/08	FIVE/8 DAYS	09/99	SEE PERMIT
05/30	5 TIMES/MONTH	10/30	TEN/MONTH
05/90	FIVE/QRTLY	10/99	SEE PERMIT
05/99	SEE PERMIT	12/01	TWELVE/DAY
06/SH	SIX/OPRSHIFT	12/30	12 PER MONTH
06/01	SIX/DAY	15/30	FIFTEEN/MONTH
6/07	SIX/WEEK	16/01	SIXTEEN/DAY
06/30	6 TIMES/MONTH	16/30	SIXTEEN/MONTH
06/99	SEE PERMIT	18/01	EIGHTEEN/DAY
07/30	7 TIMES/MONTH	18/30	EIGHTEEN/MONTH
07/99	SEE PERMIT	24/01	HOURLY
08/BA	EIGHT/BATCH	48/01	EVERY 1/2 HR
08/01	EIGHT/DAY	66/66	WPC PLAN
08/30	EIGHT/MONTH	77/77	CONTIN-GENT
08/99	SEE PERMIT	88/88	CLEANING
09/01	NINE/DAY	99/99	CONTINUOUS
09/30	NINE/MONTH		

TABLE 3

SAMPLE TYPES

SAMPLE	DESCRIPTION	SAMPLE	DESCRIPTION
CA	CALCTD	RD	RNG-DA
CN	CONTIN	RF	RCDFLO
CP	COMPOS	RG	RANG-C
CR	CK REQ	RP	REPRES
CS	CORSAM	RT	RCOTOT
CT	CERTIF	R4	RNG-4A
CU	CURVE	SR	SGLRDG
DA	DAILAV	SS	STAT-SH
DS	DISCRT	ST	STATIC
ES	ESTIMA	TI	TIMEMT
FI	FLOIND	TM	TOTALZ
GH	5GR24H	VI	VISUAL
GM	GRAB10	01	COMP-1
GR	GRAB	02	COMP-2
G2	GRAB-2	03	COMP-3
G3	GRAB-3	04	COMP-4
G4	GRAB-4	05	COMP-5
G5	GRAB-5	06	COMP-6
G6	GRAB-6	08	COMP-8
G7	GRAB-7	1H	AVG-1H
G8	GRAB-8	10	COMP10
G9	GRAB-9	12	COMP12
IM	IMERSN	16	COMP16
IN	INSTAN	2H	AVG-2H
IS	INSITU	20	COMP20
IT	IMRSTB	22	BATCH
MC	MATHCL	24	COMP24
MP	MATHCP	28	COMP28
MS	MEASRD	3G	3GR/HR
MT	METER	4C	4DA24C
NA	NOT AP	4H	AVG-4H
NR	NOTRPT	5G	5GR45M
OC	OCCURS	72	COMP72
PC	PMPCRV	96	COMP96
PL	PMPLOG	SB	SEQBAR
RC	RCORDR		

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